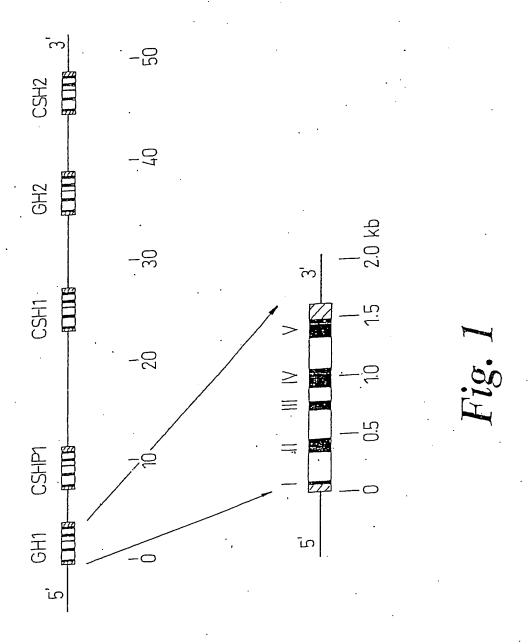
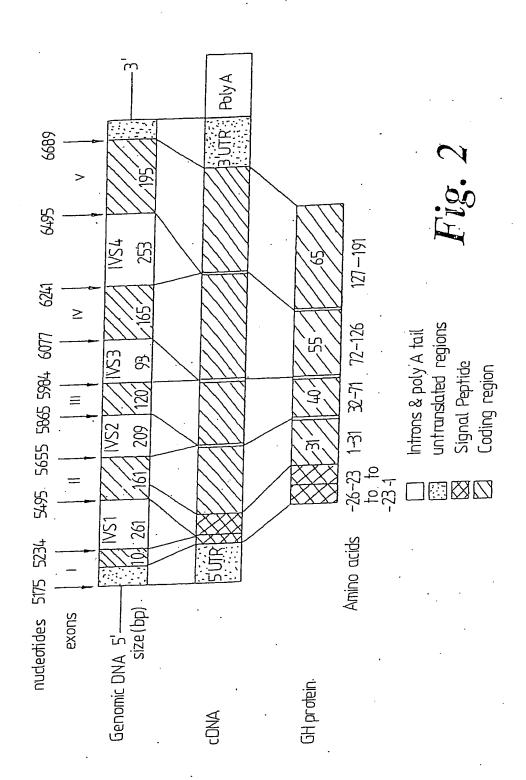
1 / 14





-136	Sp1 PIT -1 CRE		-37 -31 AG	GCCAGG TAT AAAAAGGGCC CACAAGAGAC C GCTCAAG ATCCCAA	D L D L	Fig. 2
	GH1	CSHP1 CSH1 GH2 CSH2		0H1	CSHP1 CSH1 GH2 CSH2	

-550 agtgttggaa ctgcatccag ctgactcagg ctgacccagg agtcctcagc -501

ccttgagtct gggttcttcg tcccaggga cctgggggag ccccagcaat -601 gctcagggaa aggggagagc aaagtgtggg gttggttctc tctagtggtc -551

700 ctgtttcttg gtttgtgtct ctgctgcaag tccaaggagc tggggcaata -651

4/14

FIGURE 4

+101 caatgtgtcc tgaggggaga ggcagcgacc tgtagatggg acgggggcac +150 -200 tcacaacact ggtgacggtg ggaagggaaa gatgacaagc cagggggcat -151 +251 aaaaacaaac agctcctgga gcagggagag tgctggcctc ttgctctccg +300 ggttaaacat gcggggagga ggaaagggat aggatagaga atgggatgtg -351 +201 gtatttggcc aatctcagaa agctcctggt ccctggaggg atggagagag +250 -100 cgtcagtggc cccatgcata aatgtacaca gaaacaggtg ggggcaacag cacctagcgg caatggctac aggtaagcgc ccctaaaatc cctttgggca +100 -300 caggttggcc accatggcct gcggccagag ggcacccacg tgacccttaa -251 +1 aggateceaa ggeecaaete ecegaaecae teagggteet gtggaeaget +50 +151 taaccctcag gtttggggct tctgaatgtg agtatcgcca tgtaagccca +200 -250 agagagaca agttgggtgg tatctctggc tgacactctg tgcacaaccc -201 -500 agaagtggaa ttcaggactg aatcgtgctc acaaccccca caatctattg -451 gatcccagca tgtgtgggag gagcttctaa attatccatt agcacaagcc -101 tgggagagaa ggggccaggg tataaaaagg gcccacaaga gaccagctca +301 getecetetg ttgecetetg gtttetecee aggeteeegg aegteeetge +350 -350 gtoggtaggg ggtotcaagg actggotato otgacatoot totoogogtt -301 getgtgettg geceetttte ecaacacaca cattetgtet ggtgggtgga -401 -150 +51 -400 -50

+1251 gagggaggaa aatgaatgaa tgagaaaggg agggaacagt acccaagcgc +1300 +1051 tagaggaagg catccaaacg ctgatggggg tgagggtggc gccaggggtc +1100 +1351 ccccggactg ggcagatctt caagcagacc tacagcaagt tcgacacaaa +1400 gatgggggag acctgtagtc agagccccg ggcagcacag ccaatgcccg +900 +601 cgaaaatgca ggcagatgag cacacgctga gtgaggttcc cagaaaagta +650 ggaggaaaca caacagaaat ccgtgagtgg atgccttctc cccaggcggg: +850 -551 cgctgggaaa taagaggagg agactaagga gctcagggtt tttcccgaag +600 aggaagaagc ctatatccca aaggaacaga agtattcatt cctgcagaac +750 +1001 cctggtgtac ggcgcctctg acagcaacgt ctatgacctc ctaaaggacc +1050 +1101 cccaatcctg gagccccact gactttgaga gctgtgttag agaaacactg +1150 +501 cttggggaat gggtgcgcat caggggtggc aggaaggggt gactttcccc +550 +951 cagtcgtggc tggagcccgt gcagttcctc aggagtgtct tcgccaacag +1000 +1151 ctgccctctt tttagcagtc aggccctgac ccaagagaac tcaccttatt +1200 acaatgggag ctggtctcca gcgtagacct tggtgggcgg tccttctcct +700 +751 ccccagacct ccctctgttt ctcagagtct attccgacac cctccaacag +800 +1201 cttcatttcc cctcgtgaat cctccaggcc tttctctaca ccctgaaggg +1250 +1301 ttggcctctc cttctcttcc ttcactttgc agaggctgga agatggcagc +1350 +451 ccatcgtctg caccagctgg cctttgacac ctaccaggag tttgtaagct +500 +901 teetteeeet geagaaceta gagetgetee geateteeet getgeteate +950 +351 tectggettt tggeetgete tgeetgeeet ggetteaaga gggeagtgee +400 +401 ttcccaacca ttcccttatc caggctttt gacaacgcta tgctccgcgc +450 +801 +851 +651 +701

+1701 gcaagttggg aagacaacct gtagggcctg cggggtctat tcgggaacca +1750 +2051 cagacacagc ataggctacc tgccatgccc aaccggtggg acatttgagt +2100 +1451 tcaggaagga catggacaag gtcgagacat tcctgcgcat cgtgcagtgc.+1500 +2401 gttacaggca acaactactt gtggaattgg tgaatgcatg aatagaagaa +2450 +1401 ctcacacaac gatgacgcac tactcaagaa ctacgggctg ctctactgct +1450 +1951 cccaccttgg cctcccaaat tgctgggatt acaggcgtga accactgctc +2000 +1651 gtgtccttct ataatattat ggggtggagg ggggtggtat ggagcaaggg +1700 +1751 agctggagtg cagtggcaca atcttggctc actgcaatct ccgcctcctg +1800 +1501 cgctctgtgg agggcagctg tggcttc<u>tag</u> ctgcccgggt ggcatccctg +1550 +2301 ttatctctgc ccccagtaga ttgttagctc cagaagagaa aggatcatgt +2350 +1551 tgacccctcc ccagtgcctc tcctggccct ggaagttgcc actccagtgc +1600 +1801 ggttcaagcg attctcctgc ctcagcctcc cgagttgttg ggattccagg +1850 +2151 tgttgaatte etgggeetag ggetgtgeea getgeetegt ecegteaeet +2200 +2001 ccttccctgt ccttctgatt ttaaaataac tataccagca ggaggacgtc +2050 +1901 ttcaccatat tggccaggct ggtctccaac tcctaatctc aggtgatcta +1950 +2101 tgcttgcttg gcactgtcct ctcatgcgtt gggtccactc agtagatgcc +2150 +1851 catgcatgac caggctcagc taattittgt ttttttggta gagacggggt +1900 +1601 ccaccagcct tgtcct<u>aata aa</u>attaagtt gcatcatttt gtctgactag +1650 +2351 cttttgctta tctagatatg cccatctgcc tggtacaatc tctggcacat +2400 +2201 tctggcttct tctctccctc catatcttag ctgttttcct catgagaatg +2250 +2251 ttccaaattc gaaatttcta tttaaccatt atatatttac ttgtttgcta +2300

+2451 tgagtgaatg aatgaataga caaaaggcag aaatccagcc tcaaagaact +2500 +2501 tacagtctgg taagaggaat aaaatgtctg caaatagcca caggacaggt +2550 +2551 caaaggaagg aggggctatt tccagctgag ggcaccccat caggacaggt +2550 +2651 cacaggaagg aggggctatt tccagctgag ggcaccccat caggaaagca +2600 +2651 tatcaatgga tcgtctcct ggagaataat ccccaaagtg aaattactta +2700 +2751 atcaaccag ttaggtagat ccttgtgtac ttcttggttg ttcagagatc +2750 +2751 atcaaccagt gcaaacaatc ccccatcaa tacacagcag tgcctgccc +2800 +2751 atcaaccagt gcaaacaatc ccccatcaa tacacagcag tgcctgccc +2800 +2801 tctccccccg aggtcttccg aggcccttcc tccgtgcctg aaccccctgg +2850 +2851 acatatcata tggcaaactg aagtgtccaa cgagatatag gaagtgaaac +2900 +2851 acatatcata tggcaaactg caatacaaat atgcagcatg aagtgcctcg +2950 +2951 gttcactaac ctgaaacgtg caatacaaat atgcagcatg aagtgcctcg +2950 +2951 gttcactaac ccgagctacg ctgggtgctt cttttctacc actttcctta +3000

64

ACC TCC CTC TGT TTC TCA GAG TCT ATT CCG ACA CCC TCC AAC AGG

20

Gene symbol: GH1

Location: 17q

Growth hormone 1

8 / 14 FIGURE 5

-12 19 34 49 Ala ᇛ CTG CAC CAG CTG GCC TTT GAC ACC TAC CAG GAG TTT ↓ GAA GAA GCC Phe Gly Leu ATG GCT ACA G↓GC TCC CGG ACG TCC CTG CTC CTG GCT TTT GGC CTG His Arg CTC TGC CTG CCC TGG CTT CAA GAG GGC AGT GCC TTC CCA ACC ATT. Phe Pro Thr lle gļr TAT ATC CCA. AAG GAA CAG AAG TAT TCA TTC CTG CAG AAC CCC CAG CCC TTA TCC AGG CTT TTT GAC AAC GCT ATG CTC CGC GCC CAT CGT 믱 Phe Leu Gln Asn Met Leu Arg Ala Tyr Gln Glu Phe Ala Ser Leu Leu Leu Ser Ala Ser <u>S</u> Phe Asp Asn Ala Phe Asp Thr Leu Cys Leu Pro Trp Leu Gln Glu Тy 보 Lys Ser Arg GIn Gln Leu Ala 3 Pro Leu Ser Arg Leu <u>></u> © Lys Pro 0. 크 Ξ. Ala Tyr lle Leu Met 35 -26 20 7 2

169

•		
ပ္	Asp	
GCA CTA CTC AAG AAC TAC GGG CTG CTC TAC TGC TTC AGG AAG GAC	Lys	
3GA	Arg	
TC A(Phe	
GC T	Leu Tyr Cys Phe	
rAC T	Tyr	
STC	Leu	
CTG (Tyr Gly Leu	
366	Gly	•
TAC (Tyr	
AAC.	Asn	
AAG	Ala Leu Leu Lys Asn	
CTC	Leu	٠
CTA	Leu	
GC⁄	Ala	
155	•	

.. 1.:

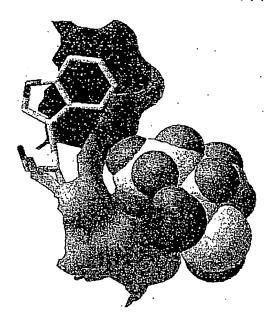
lle Val Gln Cys Arg Ser ATG GAC AÁG GTC GAG ACA TTC CTG CGC ATC GTG CAG TGC CGC TCT Glu Thr Phe Leu Arg Met Asp Lys. Val 170

184

185 GTG GAG GGC AGC TGT GGC TTC TAG

Val Glu Gly Ser Cys Gly Phe *

11/14



The tight interaction between the side chain of GH residue Ile179 and GHR residue Trp169.

The Ile179 residue is depicted by a space filling model. Trp169 is represented as a stick model whilst the molecular surface of GHR residues 167-169 is shown in green

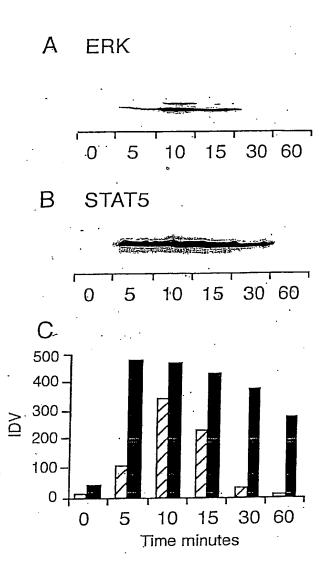
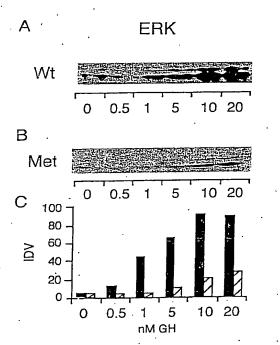


FIGURE 7



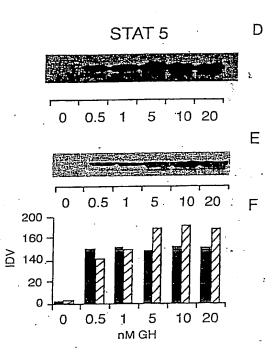


FIGURE 8

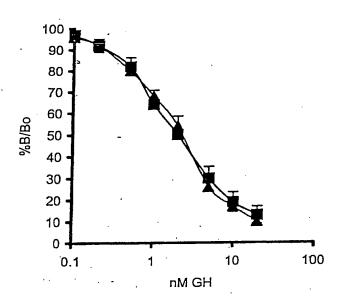


FIGURE 9

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

□ BLACK BORDERS
 □ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
 □ FADED TEXT OR DRAWING
 □ BLURRED OR ILLEGIBLE TEXT OR DRAWING
 □ SKEWED/SLANTED IMAGES
 □ COLOR OR BLACK AND WHITE PHOTOGRAPHS
 □ GRAY SCALE DOCUMENTS
 □ LINES OR MARKS ON ORIGINAL DOCUMENT

IMAGES ARE BEST AVAILABLE COPY.

☐ OTHER:

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY